THE ANNALS

AND

MAGAZINE OF NATURAL HISTORY.

> "..... per litora spargite muscum,
> Naiades, et circùm vitreos considite fontes:
> Pollice virgineo teneros hìc carpite flores:
> Floribus et pictum, divæ, replete canistrum.
> At vos, o Nymphæ Craterides, ite sub undas;
> Ite, recurvato variata corallia trunco
> Vellite muscosis e rupibus, et mihi conchas
> Ferte, Deæ pelagi, et pingui conchylia succo."
>
> *Parthenii* Ecl. 1.

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I.—*On some species of* Cuscuta. By Charles C. Babington, M.A., F.L.S., F.G.S. &c.*

[With a Plate.]

Since the paper upon *Cuscuta* (Ann. xiii. 246) was published, I have had an opportunity of examining recent specimens of *C. approximata*, and been favoured with a drawing of it (Pl. I. fig. 1.), and also of the flowers of *C. Epithymum* and *C. Trifolii* from the accurate hand of my friend Mr. J. W. Salter. I learn from these beautiful drawings and an examination of numerous specimens, that some slight alteration is necessary in the specific characters and descriptions of the plants, all however tending to show their distinctness in a clearer manner; and I trust that the difficulty inseparable from the examination of such inconspicuous objects, after the specimens have been dried, will be considered as a sufficient excuse for the inaccuracies which I am now endeavouring to correct.

In this paper I shall give revised specific characters for the three species above-mentioned, and append to each of them such observations as are requisite.

1. *C. Epithymum* (Murr.); florum glomerulis bracteatis sessilibus, *calyce campanulato* quam tubum corollæ breviori: segmentis ovatis, corona adpressa: *lobis* (squamis) *tubo corollæ cylindrico* subæquan-

* Read before the Botanical Society of Edinburgh, May 8, 1845.

tibus *apice rotundatis* fimbriatis *convergentibus basi approximatis*, stigmatibus *filiformibus*. (Pl. I. fig. 2.)

Calyx bell-shaped, thin, shorter than the tube of the corolla, usually tinged with red; segments broad, ovate-apiculate, longer than their tube. Tube of the corolla cylindrical, rather shorter than the ovate-acute spreading segments of the limb. Anthers roundish-oblong, without an apiculus, and even notched at the end. Corona closely adpressed to the tube of the corolla below; its processes (usually called "scales") nearly as long as the tube of the corolla, broad, rounded, fimbriated and converging at the end, scarcely narrowed below, separated from each other by deep narrow interspaces, which are not rounded at the bottom, and the membrane at that point is closely adpressed to the corolla. Occasionally, as in some specimens from Norfolk, the divisions between the processes disappear, and the corona becomes a deeply-lobed membrane, the lobes of which exactly resemble the upper parts of the usual processes, and are fringed almost to their base, the line of connexion between the corona and corolla remaining unaltered. In one instance this change had extended still further, and a rounded emarginate projection occupied the place of the usual division, having down its centre an appearance of being thickened: unfortunately this curious specimen has been lost during its transmission for the inspection of a friend. "Germen spherical." Stigmas simple.

The figures and descriptions of *C. Epithymum* differ so much from each other that I have considered it advisable to omit all synonyms, and give the authority for the name (Murray in Linn. Syst. Veg. ed. 13. 140) with considerable hesitation. The plant described above is probably that of Smith (Eng. Fl. ii. 25), although the figure in 'Eng. Bot.' (t. 55.) will admit of doubt. It seems also to agree sufficiently with the description given by Bertoloni (Fl. Ital. iii. 69); and is, I believe, identical with a specimen from the neighbourhood of Hamburg, kindly sent to me by Mr. W. Sonder of that city. It is worthy of remark, that in that specimen the anthers have an apiculus, and that I have never detected such a structure in British specimens.

The error committed in my former paper in describing the coronal processes as "spathulatis basi distantibus" may perhaps admit of some excuse when it is remarked that, if a specimen is softened in water, spread out and then allowed to become dry in that position, the processes shrink in such a manner as quite to agree with that description. It is hoped that the figure of the interior of the flower now given will enable botanists to ascertain the similarity or difference of their plants from that described by me, as it is the opinion of some botanists that there is still, notwithstanding the separation of *C. Trifolii* and *C. approximata*,

more than one species included under the name of *C. Epithymum*. My plant inhabits heathy places, growing upon *Erica, Ulex, Sarothamnus*, &c.

2. *C. Trifolii* (Bab.); florum glomerulis bracteatis sessilibus, *calyce infundibuliformi* tubum corollæ subæquante: segmentis lanceolatis, *interstitiis coronæ saccatis: lobis dimidium tubi infundibuliformis corollæ subæquantibus* apice rotundatis fimbriatis convergentibus *basi distantibus*, stigmatibus filiformibus. (Plate I. fig. 3.)

C. Trifolii, *Bab. in Phytol.* (Feb. 1843), i. 467; *Ann. Nat. Hist.* xiii. 252; *Eng. Bot. Suppl. incd.* t. 2898.

C. Epithymum, *β.* trifolii, *Bab. Man. Brit. Bot.* 302.

C. minor, *β.* Trifolii, *Choisy in DeCand. Prod.* ix. 453.

Calyx funnel-shaped, rather thick, about as long as the tube of the corolla, cream-coloured, but occasionally tinged with red; segments lanceolate, about as long as their tube. Tube of the corolla rather irregularly funnel-shaped, about equal in length to the lanceolate-attenuate spreading segments of the limb. Anthers cordate-ovate with a minute apiculus. Corona with saccate interstices below; its processes about half as long as the tube of the corolla, narrow, rounded, fimbriated and converging at the end, narrowed below, separated from each other by broad interspaces rounded at the bottom. Between each process the membrane projects towards the centre of the flower so as to form a cup-like space between it and the corolla. Germen truncate, narrowed below, elevated upon a longish stalk. Styles filiform, seated upon small sunken tubercles. Stigmas simple.

A comparison of the above description and character with those which precede them will, I think, prove conclusively that *C. Trifolii* is a really distinct species from *C. Epithymum*. It can scarcely be necessary to call attention to the saccate corona and the difference in the proportions and shape of the other parts of the flower.

The natural place for this plant is upon clover (*Trifolium pratense*), but it can live upon many other herbaceous plants.

3. *C. approximata* (Bab.); florum glomerulis bracteatis sessilibus, *calyce campanulato carnoso* quam tubum corollæ paulo breviori: *segmentis latis* truncatis apiculatisque vel rhomboidalibus, corona adpressa: *lobis latis adpressis tubo corollæ cylindrico* paululum brevioribus *bifidis segmentis divergentibus* apice fimbriatis *basi approximatis*, stigmatibus filiformibus. (Plate I. fig. 1.)

C. approximata, *Bab. in Ann. Nat. Hist.* (April 1844), xiii. 253.

Calyx bell-shaped, fleshy, rather shorter than the tube of the corolla, green, tinged with purple at the edge; segments broad, transverse, truncate and apiculate or rhomboidal, usually shorter than their tube. Tube of the corolla cylindrical, longer than the

triangular-ovate bluntly-pointed spreading segments of the limb. Anthers cordate-ovate, apiculate. Corona closely adpressed to the corolla; its processes rather shorter than the tube of the corolla, broad, adpressed, deeply notched: the lobes diverging, truncate and fimbriated; separated by narrow linear interspaces, which occasionally extend almost to the base of the corolla, but usually the corona is continuous throughout half its length. The form of the summit of the coronal processes will be seen to vary considerably, but always retains a general outline very different from that of any other species with which I am acquainted. Germen roundish. Styles seated upon elevated prominent tubercles. Stigmas simple.

Introduced from the East Indies with the seed of *Melilotus officinalis*, upon which plant it preys.

EXPLANATION OF PLATE I.

Fig. 1. *Cuscuta approximata*, Bab.
- *a*. The growing plant.
- *b*. Clusters of flowers.
- *c*. The calyx with an unopened corolla. Magnified.
- *d*. An expanded flower. Magnified.
- *e*. The corolla greatly magnified and laid open in order to show the structure and proportions of the corona.
- *e'*. Slightly different forms of the corona observed in other specimens.
- *f*. The germen.

Fig. 2. *Cuscuta Epithymum*, Murr.
- *c*, *d*, & *e*. The calyx, expanded flower, and the corolla laid open, showing the corona.

Fig. 3. *Cuscuta Trifolii*, Bab.
- *c*, *d*, *e* & *f*. The same parts as before.

II.—*Miscellanea Zoologica.* By George Johnston, M.D., Fellow of the Royal College of Surgeons of Edinburgh.

[Continued from vol. xv. p. 148.]

[With a Plate.]

Class Annelides. Order Errantes. Family Nereides.

Section Nereides non-tentaculatæ.

No tentacular cirri: the antennæ rudimentary.

Genus Pollicita*, *Johnston.*

Char. *Body* serpentiform: *head* rather indistinct, with three small frontal antennæ: *eyes* four: *proboscis* large, without jaws,

* This worm has been already published under the name of *Bebryce Peripatus* (Thompson's Rep. on the Fauna of Ireland, p. 273), but, having discovered that the generic name has been used by Philippi, I am under the necessity of changing it.